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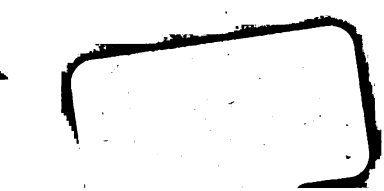

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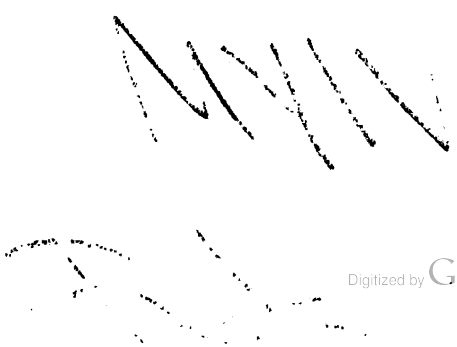

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BAKER's

PRACTICE, &c.

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RIFLEMAN PRESENTING

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Published by E. Baker Gun maker N° 24 White Chapel Road opposite the Church from Little Alie Street

TWENTY-THREE YEARS

PRACTICE

AND

OBSERVATIONS

WITH

RIFLE GUNS,

BY

EZEKIEL BAKER,

GUN-MAKER,

LONDON.

THE SECOND EDITION.

LONDON:

SOLD BY E. BAKER, 24, WHITECHAPEL ROAD, AND T. EGERTON, AT THE MILITARY LIBRARY, WHITE-HALL.

1804.

THEODORE PAGE, Printer, Black Friars Road.

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BAKER'S

PRACTICE, &c.

ONE load of powder at all distances should be attended to; no noise or conversation to take place, whilst any one is presenting or taking aim, as it will take off the attention. The rifle should be held firm in hand, in all positions in presenting to fire: lying on the belly, it will be found difficult for the left hand to grasp the stock forwards; in that case, the sling or belt should be pulled firmly back, to keep the rifle steady while firing, as appears in figures presenting, No. 2 and 3. To fire off hand without a rest; the right foot should be

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behind the left about 16 inches, the left knee upright and not bent, the right elbow down towards the body, the butt of the rifle in the hollow of the shoulder, the body easily bent forwards, so that the right eye comes over the great toe of the left foot, as figure presenting No. 1. If the body is more bent, the man will not stand so easy, nor yet so steady; the left hand, when presenting, to be forwards on the swell of the stock, the sling under the elbow, which will make it firm and steady: in presenting to fire and taking aim, both eyes open is best, as by that he will quarter his piece; that will show him when his head is too far over the centre of the stock. The cheek should be pressed on the stock very hard at all times, or the man will deceive himself; for his eye should be as a fixture on the stock every time he takes aim. In taking aim, lay the muzzle of the rifle to the lowest part of the object he means to strike, then bring it up gradually to the part he means to take his aim at: in bringing up the rifle, the fore-finger to be kept light on the trigger, when up to the

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point intended, he draws the front sight into the notch of the back sight with his eye, as line drawn, figure No. 4. He holds his breath, and pulls gradually without any snatching, as that will alter the direction of the rifle. In taking aim, sometimes he may hold his breath so long, as will cause a trembling; in that case, the rifle should be taken down, take breath, and aim again: as I never could fire so true, as when I took the first sight. It is a more certain way, to bring the muzzle of the rifle up than down, where the object can be obtained, in bringing the rifle up to the point intended; the cheek is as a fixture on the stock, that when brought to the point, it wants no alteration; but when the muzzle is brought down, it will require the face to be pressed on the stock; in that case the point will be lost, and the man much deceived. After the trigger is pulled, keep the rifle firm to the shoulder, till the ball strikes the target at 100 yards, this will be known by hearing the ball strike or hit; as that will prevent any startling or throwing back the head, as is often the case in firing. A rifleman should

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practice to pull the trigger, with a wood driver in the cock, till he can fire off his piece, without startling or shaking the muzzle of his rifle; this is a part that every rifleman should be well acquainted with, as it will make him have more command of his rifle. A rifleman to judge of his distance, should be in the habit of stepping his ground, from 1 to 300 paces, or any other distance that may be thought proper; and let him fire at any object at the distance he steps to; by this continual practice, he will learn to measure the distance with his eye to a tolerable certainty at any time; this he should practice in different places, and in all sorts of weather: in windy weather it is necessary a rifleman should practice; which will instruct him what allowance to make from the object to be fired at, either to right or left; as the wind has great power on the ball at long ranges. I have found 200 yards the greatest range I could fire to any certainty. At 300 yards I have fired very well at times, when the wind has been calm. At 4 and 500 yards I have frequently fired, and I have sometimes struck the object;

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I have aimed as near as possible at the same point; I have found it vary from the point intended: whereas at 200 yards I could have made sure of the point or thereabouts. For this reason, I am convinced the wind has great power on the ball, after it has passed to a certain distance. I have found it very uncertain to fire over water; if I took the same elevation as on land, the ball dropped short of the object. After trying many experiments of this kind, I never could fire so true as on land. Firing over boggs and swamps I have found to have a similar effect, as firing over water. A rifleman should never use himself to more than one rifle, until he is a compleat master of it; then he may use any one for the information of others. In loading with a ball, be careful that the ball is in the middle of the patch of leather, or greased rag provided for that purpose, before it is rammed down the barrel; if it is more on one side than the other, it will have an inclination to throw the ball from the straight line; both sides of the patch

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greased is the best, in hurry of loading, there can be no mistake.

A ball forced down too hard or yet too easy, I never found to go so true, as when properly fitted; the ball with its patch should fit air tight, or it will not have the desired effect. Be careful the ball is rammed home to the powder, and with as little bruising as possible; every rifleman should mark his rammer at the muzzle end of barrel when loaded, which will shew him when the ball is close down on the powder. At all times care should be taken, that the hammer is shut down upon the pan, before the ball is rammed down, or the air the ball drives before it, will blow all the powder out of the touch-hole. If by mistake that should happen, the ball must be drawn out with a screw turned into the end of the rammer, and provided for that purpose: under the head of the rammer is a small hole made to put in a lever, which makes the rammer similar to a carpenters' gimblet, and forms a purchase to screw into the ball, and by that means draws the ball out of the barrel. After firing a few

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rounds, it will be found difficult to draw the ball out; to remedy this, I have found the following method to have the desired effect. Pour a little water down the barrel, which will loosen the filth, and the ball will be drawn with ease; it may happen that water at such time cannot be got, if the man can make urine and apply it in the same way, it will have the same effect; after the ball is drawn, it will stick fast on the screw as the fingers cannot unscrew it, then lay the ball on a stone or hard ground, and strike it with the butt end of the rifle to flatten it, which will be taken off with ease; the barrel should be wiped dry before loaded again.

Rifles throwing to the right or left, is sometimes owing to the trigger pulling too hard, and at other times, to the man throwing his head too far over the centre of the stock, which causes a cross-sight. The trigger should not be pulled so hard as to alter the direction of the rifle in firing. If the rifle is found to throw to the right, the back sight should be

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drove to the left, and the front sight to the right; the sights are left loose for that purpose. If it throws to the left, move the sight contrary as above, till the man who uses it finds it right. I have no opinion of the folding elevating sights; the sight for the greatest range may be up, when a shot at a shorter distance may offer; in that case, the man not perceiving it, would be much deceived at his intended object; besides it will require the face taken from its stationary place on the stock, for the eye to pass over it: in that a man will be deceived, as he will have no rest for his cheek.

In trying off guns, I have been deceived by the folding elevating sights, for which reason I have found one sight most certain to be depended upon at all distances; and that its shape on the top a sphere of a circle, with a small notch in the centre, so as to admit of the light on each side of the front sight, which forms itself to the eye, better than any sight I have ever yet tried; the back sight should not stand so near the lock, as it will

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be liable to be filled with smoak from the pan, which will be a great denial to taking a true sight through the small notch. For if a man cannot measure his distance with his eye, he cannot do it with all the folding elevating sights that can be made. One of the principal things in shooting is, for a man to measure his distance before he shoots, and if he cannot do it, all the sights that can be added will not make him a good shot; this is only to be obtained by practice.

A rifleman should fire from a rest at a short distance, first, to ascertain the straight line of his sights; after he has so done, he should ascertain the elevation of his rifle at point blank. From that he will elevate or depress according to the distance he is from the object he fires at. The sights on the king's regulation rifles, are intended for 200 yards point blank.

A rifleman should not be in too great a hurry in loading and firing; I have found one shot in one minute as much as I could fire to keep myself steady. In ramming down the ball

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the air will sometimes force the powder into the touch-hole very hard, which will occasion the rifle to hang fire or flash in the pan, and not fire the powder in the barrel, particularly in joint or patent breech barrels; as the narrow chamber at the bottom of breech inside, is forced full of powder so hard, by the air which the ball drives before it; it makes the rifle hang or mis-fire more than it will with the plain breech. This I have frequently experienced, and for which reason I give the preference to plain breech's to rifle barrels. A rifle to hang or mis-fire, is a great denial to a rifleman, and may be the cause of his losing his life. To remedy this, put a picker made for that purpose, into the touch-hole whilst loading; shut down the hammer on the picker or the air will blow it out; when loaded, take out the picker, prime, and with the picker force a little powder into the touch-hole. Be careful not to prime too full, as it will prevent the hammer going down, and occasion the prime to be lost, or the damp to get to the priming; which will

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make the rifle hang or mis-fire, a pin or small feather will answer to stop the touch-hole occasionally. This mode of loading will do in practice, but in action, I have my doubts, as they will be apt to loose the picker; in lieu of a picker or feather after loading, prick the touch-hole; this will loosen the powder which is forced hard in loading.

A rifleman should be careful not to have his lock on full cock whilst loading, as from the pressure of forcing down the ball it might go off, which might be attended with bad consequences. To clean a barrel after firing, wash the barrel out with hot or cold water, which can be most conveniently got; after drying the barrel with tow, put a little sweet-oil on the tow, rub it up and down the barrel; the muzzle of the barrel should be stopped to keep out the air to prevent rust, or it will soon injure the rifles.

A rifle barrel should be always kept brown, as it will prevent the glare of the sun obstructing the eye, as is the case on all bright barrels. I

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have here added four different positions, the most easy and certain way which I could find to fire in, as per figures, No. 1, 2, 3, 4. Likewise two men targets that I have fired at, and a table of the weight and diameter of lead balls, from one to fifty to the pound. The charge of good powder I have found to be nearly equal to one-third the weight of the ball, priming included.

A rifleman should not blame his rifle if it does not at all times throw the ball to one point, I have seen rifles fixed so as to be immovable in firing, and yet have heard, as here shewn in appendix, No. 1, 2, and 3, and many other experiments that I have attended, and have had the same effect, although every care has been taken in loading, &c. The breech and barrel should be marked on the top with an index, to shew when the breech pin in barrel is turned to its right mark; that will at all times keep the sight and touch-hole in the right place. I have recommended to the Honorable Board of Ordnance, to have all the musquets marked so, which they have been pleased to adopt; that will

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enable the soldiers to see when the pins are right, and prevent many mistakes that have before happened, by their turning the breech-pin in barrel too far, or not far enough; that has thrown the touch-hole out of its place, either under the pan or over the hammer, which has been one cause of the musquets frequently missing fire; and it will bring the loops on barrel, to their right place, which will prevent the stock from being split; that as often been the case, by the loops not being in their right place to receive the bolts or wire pins that hold the barrel in the stock.

It was ever understood, that $\frac{3}{4}$ or a whole turn in the angle of rifle, in a barrel three feet in length, was the best for throwing a ball to a certainty; this mode of rifling is practised by the Germans, French, and Americans, and all the foreign rifles that I have ever yet seen are rifled so, and several English Gun Makers, are firmly of opinion, that one turn in four feet is the best angle possible. In the year 1800, many of the Gun Makers in England, were called on

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by the Honorable Board of Ordnance, to produce a specimen, in order to get the best rifle possible; among the rest I was one; there was also many rifles from the Continent and America all tried at Woolwich, by a committee of Field Officers appointed for that purpose, for the use of a rifle corps, raised by government; my barrel having ¼ turn only in the rifle, was approved of in preference to the whole; the practice of which is here shewn, as per appendix No. 1, fired at a target 300 yards distance. In the year 1803, a target fired at 200 yards distance, by order of his Royal Highness the Prince of Wales, with a rifle barrel 20 inches in length, for the use of his regiment of light dragoons.

Theodore Page, Printer, Black Friars Road.

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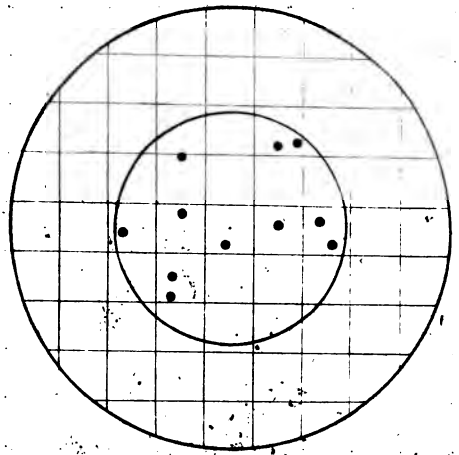
This Experiment was carried on by order of the APPENDIX, N°I.

HONORABLE BOARD OF ORDNANCE.

the 4th Day of February. 1800.



This Barrel made by Mr Baker two feet six in length, quarter turn in rifle was firmly fixed in a mortar bed as was all the other rifle barrels fixed on these experiments in such a manner as to be perfectly immoveable; 12 rounds were fired at a target 300 yards distance 11 of which struck as points here shewn the balls are the same that are used in mosquets, 14½ of which weigh a pound with four drams of powder; the balls were placed in a greased leather patch. After firing many foreign rifles as well as English, this had the preference of the whole.

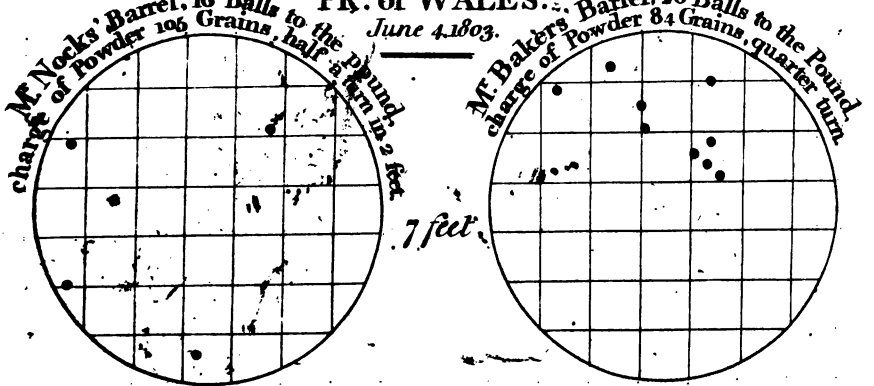
Sign'd ..... *Thomas Bloomfield.*
Colonel & Inspector of Royal Artillery

Woolwich, March 3, 1800.

APPENDIX, N° II. APPENDIX, N° III.

This Experiment was by order of his ROYAL HIGHNESS the PR. of WALES.

June 4. 1803.


Mr Nocks' Barrel. 16 Balls to the Pound
charge of Powder 106 Grains, half a turn in 2 feet
7 feet
Mr Bakers Barrel. 20 Balls to the Pound
charge of Powder 84 Grains, quarter turn

The two barrels 20 inches in length were fired at a target 200 yards distance, firmly fixed in a mortar bed in such a manner as to be perfectly immoveable; 12 rounds from each barrel were fired, and points struck as in targets here shewn. Mr Bakers barrel was afterwards mounted in a stock & 18 rounds were fired by him from the shoulder, without a rest, at a target 100 yards distance with balls 16 to the pound fixed to the cartridge as in use for smooth barrels; in rather less than seven minutes, 15 of which struck the target; the extreme divergence of the balls in inches is 22 to the right, 29¼ to the left 35¼ over and 25 inches under.

Sign'd *Benjamin Bloomfield*

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Weight of Lead Balls from One to Fifty to the Pound.
16 Ounces a Pound, 16 Drams an Ounce, 25 Grains a Dram.

By Ezekiel Baker. N.° 24 White Chapel Road.

Numb. of Balls	Ounces	Drams	Grains	Numb.	Inch.	8	10	16	20	28	32	40	50	64	80	100	150
1	16			1	1	5		1									
2	8			2	1	2		1			1						
3	5	5	9 1/3	3	1	1										1	
4	4			4	1			1									
5	3	3	5 3/5	5		7		1							1		
6	2	10	18 2/3	6		7						1					
7	2	4	16	7		7										1	
8	2			8		6		1					1				
9	1	12	12 4/9	9		6									1		1
10	1	9	16 4/5	10		6										1	1
11	1	7	7 7/11	11		6											1
12	1	5	9 1/3	12		5		1						1			
13	1	3	22 8/13	13		5		1							1		
14	1	2	8	14		5		1									1
15	1	1	1 13/15	15		5				1							1
16	1			16		5					1						1
17		15	1 14/17	17		5						1					
18		14	6 1/9	18		5							1				
19		13	13 5/19	19		5											
20		12	22 1/5	20		4	1								1		
21		12	5 7/21	21		4	1										1
22		11	17 9/11	22		4		1						1			
23		11	3 15/23	23		4		1							1		1
24		10	18 2/3	24		4		1				1					
25		10	6 18/25	25		4		1								1	
26		9	23 9/13	26		4		1									
27		9	13 13/27	27		4			1								1
28		9	4	28		4			1								
29		8	23 5/29	29		4							2				
30		8	14 14/15	30		4				1							
31		8	7 7/31	31		4					1						
32		8		32		4							1				
33		7	21 7/33	33		4								1			1
34		7	14 14/17	34		4									1		1
35		7	8 26/35	35		4										1	
36		7	3 1/9	36		4											1
37		6	26 27/37	37		4											
38		6	20 12/19	38		3		1			1		1				1
39		6	15 21/39	39		3		1			1		1			1	
40		6	11 1/6	40		3		1			1		1		1		
41		6	6 24/41	41		3		1			1		1				1
42		6	2 14/21	42		3		1			1				1		
43		6	26 30/43	43		3		1			1					1	
44		6	22 10/11	44		3		1			1						1
45		6	19 13/45	45		3		1			1						1×
46		6	15 16/23	46		3		1			1						
47		6	12 24/47	47		3		1					1				
48		6	9 1/3	48		3		1						1			1
49		6	6 14/49	49		3		1						1			

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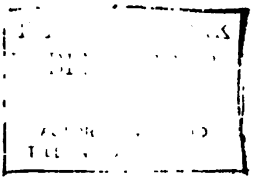

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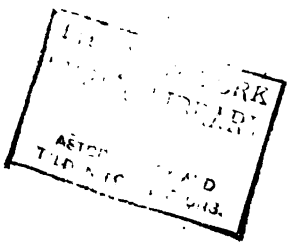

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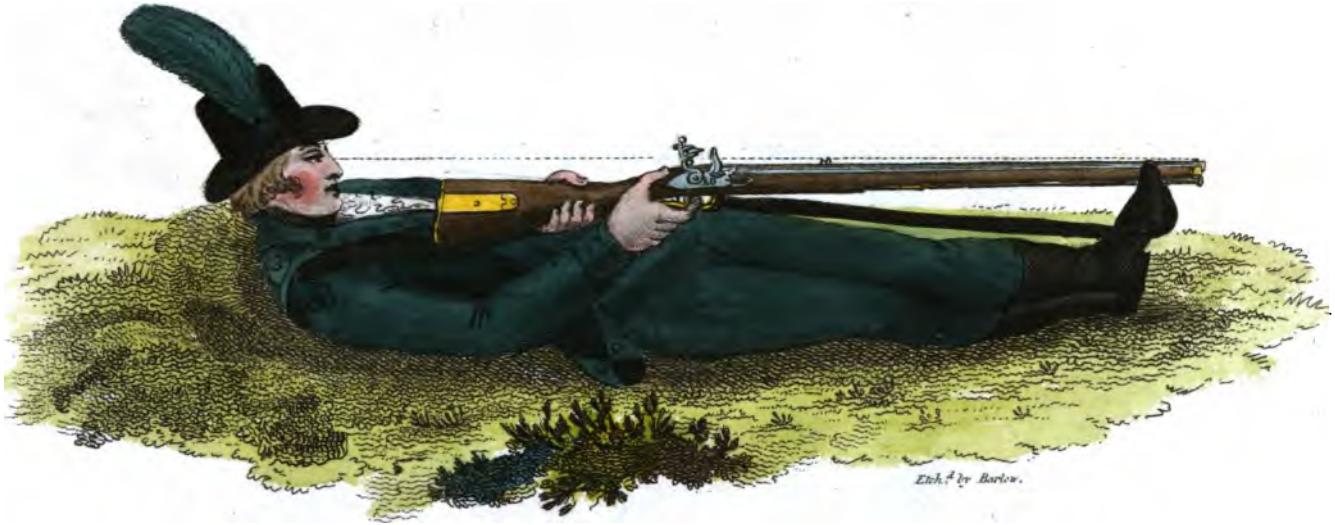

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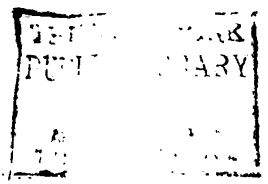

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24 Shot at 200 Yards.

Rifle Made and Shot by Ezekiel Baker.

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34 Shot at 100 Yards.

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